CLAIMS:

1) Use of a biocompatible polymer corresponding to the following general formula (I):

AaXxYy (I)

in which:

A represents a monomer,

X represents a RCOOR' group,

Y represents an O or N-sulphonate group bound to A and corresponding to one of the following formulas - ROSO3R', -RNSO3R' in which:

R represents an aliphatic hydrocarbon chain, possibly branched and/or unsaturated and which may contain one or more aromatic rings and R' represents one hydrogen atom or one cation,

a represents the number of monomers,

x represents the rate of substitution of the A monomers by the X groups,

y represents the rate of substitution of the A monomers by Y groups,

for preparation of a pharmaceutical, dermatological or cosmetic composition or a medical device intended for the prevention, relief and/or treatment of discomfort, unpleasant symptoms, irritation and/or pain and/or protection of the tissues against the latter.

2. Use according to claim 1, in which the A monomers, identical or different, are selected among sugars, esters, alcohols, amino acids, nucleotides, nucleic acids or proteins.

3. Use according to any one of claims 1 or 2, characterised in that a is such that the mass of the said polymers of formula (I) is greater than approximately 2000 daltons.

4. Use according to any one of claims 1 to 3, characterised in that x is between approximately 20 and 150% and preferably of the order of 50%.

5. Use according to any one of the preceding claims, characterised by the fact that y is between approximately 30 and 150% and preferably of the order of 100%.

6. Use according to any one of the preceding claims, characterised in that the radical R is selected from among a linear or branched alkyl, allyl or aryl group.

7. Use according to any of the preceding claims, characterised in that the said biocompatible polymer comprises functional chemical groups Z, different from X and Y and capable of bestowing additional biological or physical and chemical properties on the said polymers.

8. Use according to claim 7, characterised in that the rate of substitution of all the A monomers by Z groups represented by "z" is between 0 and 50% and preferably of the order of 30%.

9. Use according to any one of claims 7 or 8, characterised in that the Z group is a substance capable of bestowing on the said polymers improved solubility or lipophilia.

10. Use according to claim 9, characterised in that the Z groups are identical or different and are amino acids, fatty acids, fatty alcohols, ceramides or derivatives of the latter, or furthermore addressing nucleotide sequences.

11 Use according to any one of claims 7 or 8, characterised by the fact that the Z groups are identical or different and are therapeutic agents.

12. Use according to any of the preceding claims, characterised by the fact that the pharmaceutical or dermatological composition or the medical device are intended to prevent, relieve and/or treat pains and/or itching induced by lesions or irritations in an individual in an area in contact with an outside medium.

13. Use according to claim 12, characterised in that the said lesions or irritations are selected among skin lesions, corneal lesions, lesions of the eardrum, lesions of the digestive tract, lesions of the respiratory tract such as lesions of the tissues of the airways and lungs and lesions of the urogenital tract.

14. Use according to any one of claims 1 to 11, characterised in that the pharmaceutical or dermatological composition or the medical device are intended to prevent, relieve and/or treat pains in the tendons and/or cartilages and/or the joints and/or

the back and/or the muscles and in general, following impact and/or diffuse pains such as diffuse pains in the abdomen and in the head such as headaches.

15. Use of a biocompatible polymer such as defined according to any one of claims 1 to 11 for preparation of a comfort and particularly cosmetic composition for prevention and relief of skin discomfort and unpleasant symptoms such as tingling, irritation, itching and pulling and for protection of the tissues such as the skin, cornea and mucosae.

16. Use according to any one of claims 1 to 11, characterised in that the pharmaceutical or dermatological composition or the medical device is intended to prevent, relieve and/or treat

- the pain and/or pruritus induced by
  * deep skin burns, particularly deep second degree burns;
  * scars and cicatricial tissue;
  * ulcers of the skin and/or the mucosae and/or the cornea;
  * peripheral and/or degenerative neuropathies;
  * cold sores;
  * chapping, particularly chapping of the fingers;
  * hyperkeratinisation of the skin, psoriasis, eczema or herpes zoster;
  * a surgical operation;
  * radiotherapy;
  * a lesion of the eardrum;
  * asthma and/or rhinitis and/or bronchial obstruction;
  * aphthous ulcers and/or sore throats and/or dental pains;
  * arthroses or arthritis;
- irritation of the mucosae and/or the skin;
- chronic diseases characterised by destruction and/or permanent remodelling of the extracellular matrix, such as for example peripheral and/or degenerative neuropathies, psoriasis, eczema, herpes zoster, asthma, bronchitis, rhinitis, arthroses, arthritis and Crohn's disease.

17. Use according to any one of claims 1 to 11, characterised in that the pharmaceutical or dermatological composition or the medical device is intended to promote remodelling of closed scars.